

# **LONG RANGE PLAN FOR PLANT MATERIALS IN MINNESOTA 2008-2012**

## **I. Introduction**

The mission of the Natural Resources Conservation Service (NRCS) in Minnesota is to assist the soil and water conservation districts in conservation, development, and productive use of soil, water and related resources. The objective of the plant materials activities is to assemble, evaluate, and release improved plant materials; determine techniques for their successful use; provide for commercial increase; and promote their use in conservation and environmental improvement programs.

This Long Range Plan (LRP) is intended to guide the development and use of plant materials by the NRCS for the state of Minnesota. The plan will also serve as reference to develop specific action items which will be incorporated into the state's annual plan.

## **II. Long Range Plan Development**

This LRP was developed in accordance with the revised National Plant Materials Manual, Part 540.01. Needs and priorities of the individual states served by the PMC were discussed at a joint meeting in Fargo on March 8, 2006. Feedback in the form of survey questionnaires was received by various NRCS offices, conservation districts, and partners. The Plant Materials Program Strategic Plan Survey Responses publication (2/07/05) was also used to provide insight and guidance to the decision making process. State Plant Materials Committee members reviewed the plan.

## **III. NRCS Objectives, Needs, and Recommended Actions**

All needs are considered to be high priority.

### **NRCS Objective: Healthy and Productive Grazing Lands**

There is a lack of species diversity for establishing native grasslands. Additional warm-season and cool-season grass species, as well as forbs and legumes are needed. The technology has been developed to successfully revegetate these areas, but information needs to be more completely incorporated into the Minnesota Field Office Technical Guide (FOTG), and provided to partners. Management and maintenance after establishment must be promoted as a key ingredient to maintain healthy native

grasslands. New information from the Bismarck Plant Materials Center (PMC) and partners regarding the forage quality of various species/varieties of forage grasses needs to be distributed and promoted.

**Recommended Action:** Evaluate and select additional native species for adaptability, forage quality and quantity with respect to livestock grazing. Distribute the information technology to partners and the general public. Develop brochures and information regarding new varieties for pasture and hayland use in Minnesota.

### **NRCS Objective: High Quality Wildlife Habitat**

Lack of diversity exists within native seedings in terms of adapted seed sources of forbs, legumes, and shrubs. There is increased public interest in native species for many of the federal programs such as the Conservation Reserve Program (CRP), Wildlife Habitat Incentive Program (WHIP), Environmental Quality Incentives Program (EQIP), and the Wetlands Reserve Program (WRP). Similar to what was identified in the previous objective, the technology has been developed to revegetate these areas, but management must be promoted as a critical factor for maintaining these areas as healthy, functional native plant communities. The issue of burning as a high priority management goal needs to be addressed. There needs to be promotion regarding the benefits of using native cultivars and other releases developed through the Plant Materials Program.

**Recommended Action:** Evaluate and select additional native species for wildlife cover and habitat, including use as food plots. Promote the benefits of burning as a management tool. Develop a brochure promoting the benefits of choosing native grass varieties/releases for conservation plantings. Distribute technology to partners and general public.

### **NRCS Objective: Healthy and Productive Cropland**

Diversity of species is a key component to offset disease and insect problems in conservation tree and shrub plantings. Increased problems with disease and insects for highly used species such as green ash are a cause for concern. The need exists for a better variety and broader selection of improved woody species (both native and introduced) for use in windbreaks.

**Recommended Action:** Identify and evaluate woody species (both native and introduced) which may have potential for use in windbreak plantings. Continue to test various species and varieties in PMC Off-center Evaluation Plantings. Provide information to field offices and various partners in Minnesota through summary reports and informational newsletters.

Saline seeps and salty areas reduce the value and production efficiency of cropland as well as other land use areas. Numerous studies have been done and abundant information is available on tolerances of various plant species to the effects of these sites, however, this information is not always readily available or understandable.

**Recommended Action:** Develop general information in a user-friendly format to provide to landowners and partners regarding the tolerance levels of various plant species to a range of salinity levels.

Cover crops are needed for erosion control and improving soil health. Information needs to be provided to the landowner and various partners

**Recommended Action:** Work with key partners to distribute and/or develop information promoting cover crops for field office use and incorporation into the Minnesota Field Office Technical Guide (FOTG).

### **NRCS Objective: Healthy Watersheds Providing Clean and Abundant Water**

Degradation of water quality has occurred through excessive sedimentation from unstable streambanks and shorelines. Current and past agricultural practices have resulted in the loss of riparian vegetation necessary to stabilize the stream course resulting in unstable conditions and excessive sedimentation. In some instances, the invasion of trees on streambanks originally supporting prairie has resulted in bank erosion.

**Recommended Action:** The need exists to identify available plant materials that may be used for streambank and shoreline revegetation. Techniques for installation and management have been developed by NRCS and various partners, but additional training and promotion needs to occur.

Degradation of water quality has occurred through non-point source contaminants and excessive soil erosion from cultivated areas. To reduce the degradation of water quality through sedimentation and non-point source contaminants, the practices of nutrient and pesticide management, filter strips, field borders, and forest riparian buffers may be applied. There is a need to evaluate traditional and non-traditional plant materials as bioremediation filters to intercept and uptake contaminants.

**Recommended Action:** Evaluate plant materials for bioremediation and tolerance to sediment deposition. Work with key partners to incorporate information into the Minnesota FOTG.

Invasive species such as leafy spurge, buckthorn, and garlic mustard cause severe economic and environmental harm. Herbicides may cause ground water contamination and impact water quality. Providing information to the landowner and general public regarding identification and appropriate control should be a high priority.

**Recommended Action:** Develop procedures to acknowledge invasive species and provide information in technical notes and other FOTG documentation. Minnesota NRCS state office staff will continue to provide leadership to identify priorities, develop information, and assist with invasive species workshops.

### **NRCS Objective: Healthy and Productive Wetlands**

There is a general lack of both plant materials and technology necessary for wetland enhancement, restoration, and creation. The need exists to provide wetland species and accompanying technology regarding establishment and survival for those wetland species. Increasing species diversity, especially in regard to the non-grass component, improves nesting success and brood-rearing use by various wildlife species.

**Recommended Action:** Identify and select adapted native wetland species for potential use in wetland restoration, enhancement, and creation. Evaluate those selected plants in terms of propagation techniques, establishment methods, and maintenance requirements.

Pollination is one of nature's services that we often take for granted. Effective pollination requires natural vegetation and suitable habitat for pollinators. Information regarding the benefits needs to be promoted.

**Recommended Action:** Consideration should be given to encouraging incentives for planting recommended species for pollinators. The state office needs to continue to provide leadership in the development of information and technology with assistance from PMC staff.

### **NRCS Objective: A Diverse and Well-Served Customer Base**

An important part of both the Agency and Plant Materials Program Strategic Plan is addressing civil rights and providing equal access for all Americans to the Plant Materials Program. These underserved groups should be identified and steps taken to assure that no barrier exists and that all products are delivered fairly and equitably. We need to promote the products of the Plant Materials Program through effective marketing and program delivery.

**Recommended Action:** Emphasize additional uses of plant materials for public safety, health, cultural, and aesthetic issues. Target urban conservation uses of plant releases for energy and water savings. Promote native grasses for landscaping to greenhouses and nurseries in the State. Sell the economic as well as the environmental benefits.

Using trees and shrubs for living snow fences provides a "green" alternative to standard engineering practices to solve the problem of snow blocked roadways during the winter season. Public safety is a high priority and living snow fences should be promoted.

**Recommended Action:** State office staff and key partners will provide necessary information to field office staff to work with local entities to promote the benefits of living snow fences. The PMC will assist with recommendations concerning appropriate species and varieties.

Additional customers can be reached through the Plant Materials Program by providing emphasis on non-traditional and specialized use of conservation plants such as in alternative income crops (fruit processing, medicinal, decorative), carbon sequestration or promoting plant materials as a biomass or ethanol fuel for energy conservation.

**Recommended Action:** Target newsletters, brochures, and training sessions to promote these more specialized uses of conservation plants. Work closely with key partners who have laboratory facilities and research expertise to better address the issues of carbon sequestration and ethanol fuels for energy conservation. Utilize the plant expertise of the PMC to screen species and develop field management protocols.

**Key objectives, needs and action items were developed by committee members through round-table discussion at the State Plant Materials Committee Meeting held in Saint Cloud, Minnesota on December 12, 2007.**